

## **What is claimed is:**

**[Claim 1]** 1. A method of cleaning an item comprising a cleaning apparatus, employing a water source and a bleaching agent wherein the bleaching agent is a halogen dioxide composition.

**[Claim 2]** 2. The method of cleaning an item wherein the halogen dioxide composition is chlorine dioxide.

**[Claim 3]** 3. The method of claim 1 wherein the cleaning method further includes a surfactant.

**[Claim 4]** 4. The method of claim 3 wherein the surfactant is a detergent system.

**[Claim 5]** 5. The method of claim 3 wherein the surfactant delivers an in use pH of at least 2.5.

**[Claim 6]** 6. The method of claim 1 where in the cleaning method further includes a surfactant delivering an in use pH in the range of 7–10.5.

**[Claim 7]** 7. The method of claim 3 where in the surfactant and the bleaching agent are placed in the cleaning apparatus at approximately the same time.

**[Claim 8]** 8. The method of claim 7 wherein the bleaching agent is chlorine dioxide.

**[Claim 9]** 9. The method of claim 8 wherein the chlorine dioxide is produced using a sodium chlorite in the presence of an acid, a two or three component generator or electrolytic means.

**[Claim 10]** 10. The method of claim 1 where in the halogen dioxide is present in the washing system in at least 2 ppm.

**[Claim 11]** 11. The method of claim 1 where in the halogen dioxide is present in the washing system at 20 to 500 ppm.

**[Claim 12]** 12. A method according to claim 1 wherein the wash temperature of the system is at least 10°C.

**[Claim 13]** 13. A method according to claim 1 wherein the wash temperature of the system is in the range of 40–60°C.

**[Claim 14]** 14. A method of cleaning an item soiled with chlorhexidine gluconate without setting the stain comprising a cleaning device, a water source and a bleaching agent.

**[Claim 15]** 15. The method of claim 14 where in the bleaching agent is a halogen dioxide.

**[Claim 16]** 16. The method of claim 14 where in the bleaching agent is chlorine dioxide.

**[Claim 17]** 17. The method of claim 14 wherein the cleaning method further includes a surfactant.

**[Claim 18]** 18. The method of claim 17 wherein the surfactant is a detergent system.

**[Claim 19]** 19. A method of cleaning an item comprising a cleaning apparatus, employing a water source, the water from the water source passes into the cleaning apparatus where the soiled item is contained, to the water and item there is added a surfactant and a bleaching agent wherein the bleaching agent is a halogen dioxide composition.

**[Claim 20]** 20. The method of claim 19 wherein the bleaching agent is chlorine dioxide.

**[Claim 21]** 21. The method of claim 19 wherein the surfactant is a detergent system.

**[Claim 22]** 22. The method of cleaning fabric items wherein the fabric item is placed into a cleaning apparatus with a water source leading to the fabric item and a halogen dioxide is added to the water from the water source to clean and bleach the fabric item.

**[Claim 23]** 23. The method of cleaning fabric items of claim 22 further including a surfactant.

**[Claim 24]** 24. The method of cleaning fabric items of claim 23 wherein the surfactant is a laundry detergent.

**[Claim 25]** 25. The method of cleaning a fabric item of claim 24 wherein the halogen dioxide is chlorine dioxide.

**[Claim 26]** 26. The method of cleaning a fabric item of claim 24 wherein the halogen dioxide bleaching agent and the laundry detergent are added to the cleaning apparatus at approximately the same time.